

## REMARKS

At the outset, the Applicant wishes to thank Primary Examiner Gregory J. Strimbu and Patent Examiner Khoa Tran for the many courtesies extended to the undersigned attorney during the Personal Interview at the U.S.P.T.O. on September 2, 2004. The substance of this Personal Interview is set forth in the Examiner Interview Summary, and in this Amendment.

In each of claims 23 to 44, the phrase "door internal element" has been revised to recite "motor vehicle door internal element". In claim 33, the language "formed as a bead, and said bead is" has been cancelled from this claim. This terminology "formed as a bead" has been inserted into claim 23. Other revisions were made to claim 23.

The present invention is directed to a motor vehicle door internal element (3), to be arranged between a door outer side (6) of a motor vehicle door (1) and an inner lining (7), wherein the motor vehicle door internal element (3) is a support and sealing element having two solid boundary layers (52) and a foamed, porous central layer (54) lying between the two solid boundary layers, wherein said solid boundary layers (52) and said foamed, porous central layer (54) are made of the same

thermoplastic material and are zones of one single body produced by a single foaming process, wherein said solid boundary layers (52) are formed integrally with each other at an end face (15) of the motor vehicle door internal element (3), and wherein the motor vehicle door internal element further comprises a sealing body (12) formed as a bead and disposed at an edge of motor vehicle door internal element.

The door internal element (3) according to the present invention is not only a support element but also a sealing element, i.e., a moisture barrier (see page 2, lines 1-3 of the Specification; FIG. 2, page 9, 2<sup>nd</sup> paragraph of the Specification; page 19, 2<sup>nd</sup> paragraph of the Specification of the present application).

The door internal element (3) acquires its final form and finish in a single foaming operation using a thermoplastic material and foaming agent. (See page 9, last paragraph of the Specification). Thus, the solid boundary layers (52) and the foamed, porous central layer (54) are made of the same thermoplastic material and are zones of one single body produced by a single foaming process. As shown in FIGS. 13 and 14, which are sectional views along lines XIII-XIII and XIV-XIV in FIG. 11, the solid boundary layers (52) are formed integrally with each

other at an end face (15) of the door internal element (3). (See page 15, lines 5-29: "Boundary layer 52 means the regions..." of the Specification).

The sealing body (12) of the door internal element (3) according to the invention is formed as a bead (see FIGS. 2 and 13 and original claim 11 of the English translation of the PCT application).

Thus, these amendments to claim 23 are clearly supported by the original disclosure of the present application.

Based upon the Personal Interview and the newly cited prior art references, the above-noted amendments to the claims are to limit the claimed door internal element in order to define the invention over the prior art references.

The Applicant comments upon the prior art rejections as follows.

*Basson et al* (U.S. Patent No. 4,882,842) disclose a motor vehicle door trim panel unit (200) having a door inner element (i.e. panel layer 201), see FIG. 3A, arranged between a molded panel layer (202) and a moisture or vapor barrier layer (203).

(Please see Column 8, line 35, to column 9, line 7).

A similar trim panel unit (300) is shown in FIG. 4. The door inner element (panel layer 301) comprises an integrated sealing structure (341) for a flexible sealing gasket (141). The sealing gasket (141) serves to seal a wire bundle 140 (see FIG. 4, column 9, lines 33-42 and column 6, lines 60-64).

It is respectfully pointed out that the reference number 351 does not denote a sealing body, as alleged by the Patent Examiner. Instead, it is a screw fastener (see FIG. 4 and column 9, lines 23-25).

*Basson et al.* disclose that the primary layers (201/202) for the trim panel, but not the secondary moisture barrier covering (203), are preferably made by reaction injection molding, using typically a custom polyurethane system. In such RIM technology, the finished trim material, e.g. vinyl or fabric material, can be included in the mold for forming the outermost trim panel layer (201) in a single step. Using this process, the vinyl or fabric material is placed in the mold along with any appropriate cushioning foam, and the polyurethane resin is then poured or injected into the mold behind the finished trim material.

The moisture or vapor barrier layer (203) is formed by vacuum forming techniques (see again column 9, lines 4-7).

*Basson et al.* do not disclose a door internal element which is a support element as well as a sealing element, and which is produced by a single process. The molded trim panel (201) does not function as a sealing element. As a matter of fact, the sealing function is performed by moisture or vapor barrier layer (203). Accordingly, the molded trim panel (201) and the barrier layer (203) are produced in separate steps or processes.

In particular, *Basson et al.* do not disclose a door internal element having two solid boundary layers and a foamed, porous central layer lying between the two solid boundary layers, wherein the solid boundary layers and the foamed, porous central layer are made of the same thermoplastic material and are zones of one single body produced by a single foaming process, and wherein said solid boundary layers are formed integrally with each other at an end face of the door internal element.

Moreover, *Basson et al.* do not disclose a door internal element having a sealing body (12) which is formed as a bead and being disposed at an edge of door internal element.

*Marita et al.* (U.S. Patent No. 5,395,580) disclose a method for fabricating an automotive interior component. The automotive interior component consists of a laminated structure comprising a resin core member (11) having a certain rigidity, a high density polyurethane foam layer (15), a soft foam layer (14), and a surface skin sheet (13) made of PVC. The high density polyurethane foam layer (15) is bonded over the reverse surface of the PVC skin sheet (13) which is lined by the soft foam layer (14). The method for fabricating this automotive interior component is characterized in that a laminate comprising the layers 13 to 15 is positioned between an upper mold part (30) and a lower mold part (20) for mold press forming, wherein the laminate (13-15) with the surface skin sheet (13) facing upwards has its peripheral part retained by a clamping device (40). A predetermined amount of a semi-molten resin material (80 wt.-% of polypropylene resin and 20 wt.-% of inorganic filler) is fed onto a mold surface of the lower mold part (20) following the positioning of the laminate (13-15). Then, the mold parts are closed and engaged with each other in order to press form the resin core member (11). (Please see Column 5, Embodiment 1 and Claim 1).

*Marita et al.* do not teach or suggest a door internal

• element having two solid boundary layers and a foamed, porous central layer lying between the two solid boundary layers, wherein the solid boundary layers and the foamed, porous central layer are made of the same thermoplastic material and are zones of one single body produced by a single foaming process, and wherein said solid boundary layers are formed integrally with each other at an end face of the door internal element.

The deficiencies in the teachings of the primary references of *Basson* in view of *Morita* are not overcome by the disclosures of the secondary references to *Staser*, *Wurm*, *Beaulat* and *Ishikawa*.

The *Staser U.S. Patent No. 5,535,553* in column 1, in lines 55 to 60 discloses a door module with a base mounting frame for vehicle door hardware. The frame includes a network of integrally molded structural elements and hardware mounting surfaces with various interfacing features, molded in a single plastic piece.

Also, *Staser*, in column 2, in lines 3 to 10 discloses that the module generally includes a one-piece molded plastic frame constructed with preferred hollow tubular structural elements, integrally molded hardware mounting surfaces and preferably

integrates at least one window guide channel into the structure. Specifically designed features are preferably molded into the frame for mounting various hardware items and for geometric dimensioning and tolerancing purposes.

The *Wurm U.S. Patent No. 5,960,588* in column 2, in lines 12 to 18 discloses a device and a process for adjustment of a frameless window pane moved by a two-strand cable window lifter by means of a lateral movement of the bottom of the guide rails which tilts the window pane and reliably ensures simple adjustment of the window pane without the risk of unwanted stresses.

The *Beulat U.S. Patent No. 5,595,415* in column 2, in lines 8 to 19 discloses a multifunction composite lining for automobile doors adapted to be mounted between the structure of the door and an interior covering. This lining includes an inner panel providing the sealing function and comprises over at least part of its surface a twin wall delimiting at least one integral volume or cavity which is used for one or more additional functions. For example, it can provide ducting for air conditioning air or electrical cables, and said lining is separate from the interior covering and the two walls of the twin-wall structure being fastened together.



The *Ishikawa U.S. Patent No. 5,102, 163* in column 3, in lines 10 to 23 discloses providing an impact energy absorbing structure for a vehicle, employing shock absorbing means that are not susceptible to the action of light external forces tending to produce flaws such as dents therein and that are capable of effectively absorbing impact energy that acts thereon in case of a collision.

Also, *Ishikawa* discloses providing an impact energy absorbing structure for a vehicle, capable of reducing impact energy applied to both of an occupant's chest and lumbar region and capable of reducing the effect of shocks particularly to the occupant's chest.

Therefore, none of *Staser*, *Wurm*, *Beaulat* or *Ishikawa* disclose the claimed door internal element having two solid boundary layers and a foamed, porous central layer lying between the two solid boundary layers, wherein the solid boundary layers and the foamed, porous central layer are made of the same thermoplastic material and are zones of one single body produced by a single foaming process, and wherein said solid boundary layers are formed integrally with each other at an end face of the door internal element.

Moreover, none of these references disclose a door internal element having a sealing body (12) which is formed as a bead and being disposed at an edge of door internal element.

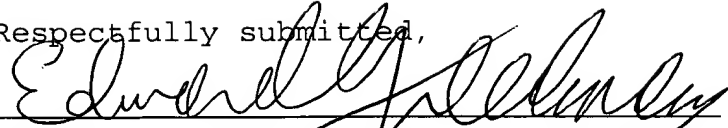
Also enclosed is a Declaration Under Rule 132, executed by Mr. Johannes Hysky, who is the Vice President of Research & Development and the Managing Director of the assignee, namely Carcoustics Tech Center GmbH, of the present invention.

This Declaration is in support of the patentability of the invention described and claimed in the above referenced patent application, and describes these new and unique characteristics of the door internal element according to the present invention which are particularly achieved in comparison with conventional door internal elements.

In summary, claims 23 to 44 have been amended, and are pending. In view of these amendments, it is firmly believed that the present invention, and all the claims, are patentable under 35 U.S.C. 103 over all the prior art applied by the Patent Examiner. A prompt Notification of Allowability is respectfully

requested.

Respectfully submitted,

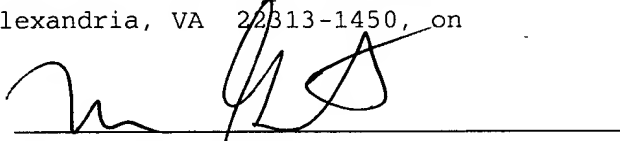


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Enclosures: 1. Copy of Petition for Two Month Extension of Time  
2. Declaration Under Rule 132 of Mr. Johannes Hysky

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on March 28, 2005.



Maria Guastella